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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,757	08/25/2003	Jagannathan Seenu Srinivasan	NPE 2002-002	2733

7590 01/28/2005

James C. Valentine
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4350 Northern Pike
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EXAMINER

PALABRICA, RICARDO J

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 01/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/647,757

Applicant(s)

SRINIVASAN, JAGANNATHAN
SEENU

Examiner

Rick Palabrica

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/10/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election of Group I (including claims 1-5 and 7), along with a request for reconsideration of the restriction requirement, in the reply filed on 1/10/05 is acknowledged. Applicant alleges that examination of Group II will not require substantially more time and resources than examination of Group I. The Examiner disagrees for the same reasons as those given in the 12/27/04 Office Action, and the fact that each group will require a separate search. These individual searches will not be co-extensive and thus present undue burden on the examiner.

Based on the above and Applicant's authorization in said reply, claim 6 is canceled.

The restriction requirement is still deemed proper and is therefore made **FINAL**.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-5 and 7 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a structural component in the feed water path between the upper and lower taps of a steam generator, does not reasonably provide enablement for a structural component that is not disposed between said taps. The

Art Unit: 3641

specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

Note that the specification states:

"[T]he invention covers the pressure drop across any of the structural elements in the feed water path between the upper and lower taps such as intermediate deck plate, feed ring, etc." (see page 10, lines 3+ and 27+).

The claims recite a method of controlling a steam generator feed water level comprising the step of providing a measure of a delta-pressure variation at about the lower level tap attributable to the structural component (e.g. see claims 1 and 7). This structural component is recited in the preamble of said claims as "a structural component supported within the steam generator." Underlining provided. Thus, contrary to the statement in the specification, the claims admit to being able to practice the method on any structural component that is supported within the steam generator, including components located outside the feed water path between the upper and lower taps of a steam generator.

3. Claims 1-5 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Art Unit: 3641

Srinivasan (U.S. 5,024,802) discloses a method for measuring the water level in a nuclear steam generator with upper and lower level taps, and a level sensor.

Srinivasan does not provide details of his steam generator 36 or how the steam generator tubes are supported (e.g., see Abstract and Fig. 2). Wilson (U.S. 4,709,756) teaches a nuclear steam generator wherein the tubes are each supported by a plurality of lands (e.g., elements 36a, b, c and d in Fig. 2). Applicant's claim language, "a structural component supported within the steam generator" reads on any one of these lands (e.g., 36a) in any one tube of the steam generator in the combination of Srinivasan and Wilson.

There is neither an adequate description nor enabling disclosure as to how and in what manner the pressure drop due to such one land can have a measurable effect on the water level measurement, considering that there are typically several thousand of these tubes in a nuclear steam generator.

There is neither an adequate description nor enabling disclosure for the step of "calculating said bias amount as maximum pressure variation less riser span percentage times the pressure variation at full power." (see claim 4).

4. Claims 1-5 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are vague, indefinite and incomplete because there is no proper support as to how the pressure drop across a structural component, such as a single

Art Unit: 3641

tube support for one steam generator tube, i.e., a single land, as discussed in section 3 above, can have a measurable effect on the claimed method of water level measurement. Thus, the metes and bounds of the claims cannot be determined.

The claims are vague, indefinite and incomplete because there is no support as to how to calculate a bias amount based of a so-called "riser span percentage", as discussed in section 3 above. Thus, the metes and bounds of the claims cannot be determined.

Claim 3 recites the limitation "maximum power" in line 3. There is insufficient antecedent basis for this limitation in the claim. Note that there is a plurality of such "power" in a nuclear plant, e.g., turbine power, "electrical power output", etc.

Claim 4 recites the limitations "said bias amount" and "riser span percentage" in lines 1 and 2, respectively. There are insufficient antecedent bases for these limitations in the claim.

5. Claims 1-5 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the positional relationship of the structural component with the feed water path and the taps of the steam generator.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References B-E and U further illustrate prior art.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick Palabrica whose telephone number is 703-306-5756. The examiner can normally be reached on 6:30-5:00, Mon-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Carone can be reached on 703-306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R Palabrica

RJP
January 24, 2005